

REMARKS

The Office Action dated January 17, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-5, 7, 16, 18-20, 22, and 23 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Support for these amendments can be found on page 7, lines 22-36 of the present application. Claims 11-15 have been canceled without prejudice or disclaimer. Claims 1-10, 16, 18-20, 22, and 23 are respectfully submitted for consideration.

Claims 1-4, 6-9, 11-14, 16, 18, 19, 22, and 23 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,636,501 of Dispensa et al. (Dispensa). It is respectfully submitted that the claims recite subject matter that is neither disclosed nor suggested in Dispensa.

Independent claim 1, upon which claims 2-5 are dependent, recites an apparatus that includes a memory configured to store a pre-defined list of rules for detecting special data packets. The apparatus also includes a detector configured to detect special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said memory. The apparatus further includes a router configured to request instructions for the special data packets detected by said detector and route the special data packets in accordance with instructions received on request. The apparatus additionally includes an internal entity configured to store instructions for the special data packets. The router is

configured to notify said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. An external entity is configured to determine and update the instructions stored in said internal entity during active operations, wherein the external entity is connectable to at least one further router located outside said apparatus.

Independent claim 6, upon which claims 7-10 are dependent, recites a method that includes storing a pre-defined list of rules for detecting special data packets. The method also includes detecting special data packets in a received plurality of data packets based on the stored pre-defined list of rules. The method further includes requesting instructions for the detected special data packets and routing the special data packets in a data network in accordance with instructions received on request. The method also includes notifying an internal entity of the detected special data packets and requesting instructions for the special data packets from said internal entity when requesting the instructions for the detected special data packets. The instructions stored in said internal entity are determined and updated by an external entity during active operations. The method is used in an apparatus, and the external entity is connectable to at least one further router located outside said apparatus.

Independent claim 16 recites an apparatus that includes storing means for storing a pre-defined list of rules for detecting special data packets. The apparatus also includes detecting means for detecting special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said storing means. The apparatus further

includes routing means for requesting instructions for the special data packets detected by said detecting means and route the special data packets in accordance with instructions received on request. The apparatus also includes internal entity means for storing instructions for the special data packets. The routing means comprises notifying means for notifying said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. An external entity comprises means for determining and means for updating the instructions stored in said internal entity during active operations. The external entity is connectable to at least one further routing means located outside said apparatus.

Independent claim 18, upon which claims 19 and 22 are dependent, recites an apparatus that includes a router configured to request instructions for special data packets detected by a detector and route the special data packets in accordance with instructions received on request. The router is configured to notify an internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. The router is configured to notify an external entity of the detected special data packets instead of said internal entity, and request instructions for the special data packets from said external entity instead of said internal entity. The external entity is connectable to at least one further router located outside said apparatus.

Independent claim 22 recites a computer program implemented on a computer-readable medium, said computer program controlling a processor to store a pre-defined list of rules for detecting special data packets. The processor is configured to detect a

special data packets in a received plurality of data packets based on one of the stored pre-defined list of rules. The processor is also configured to request instructions for the detected special data packets. The processor is configured to route the special data packets in a data network in accordance with instructions received upon the request. The processor is configured to notify an internal entity of the detected special data packets. The processor is configured to request instructions for the special data packets from the internal entity when requesting the instructions for the detected special data packets. The instructions stored in the internal entity are determined and updated by an external entity during active operations. The computer program is used in an apparatus, and the external entity is connectable to at least one further router located outside said apparatus.

Independent claim 23 recites an apparatus that includes routing means for requesting instructions for special data packets detected by a detecting means and routing the special data packets in accordance with instructions received on request. The routing means comprises notifying means for notifying an internal entity of the detected special data packets and requesting instructions for the special data packets from said internal entity. The routing means comprises notifying means for notifying an external entity of the detected special data packets instead of said internal entity, and requesting instructions for the special data packets from said external entity instead of said internal entity. The external entity is connectable to at least one further routing means located outside said apparatus.

As will be discussed below, Dispensa fails to disclose or suggest all of the features of all of the presently pending claims.

Dispensa generally describes a communication system speeding up digital traffic between nodes. The traffic is organized into data frames flowing over network high and low speed links attached to entry and exit ports of the nodes. Low speed modules connect the low speed links to a high speed switch. Router dispatch modules connect the high speed switch to a node attached to a high speed link for forwarding each data frame toward a dynamically selected target low speed module via the high speed switch, such that the dynamic selection of the target low speed module is based on detection of the module with the least load. At least one main router is attached to the high speed switch for storing a routing table to enable the targeted low speed module to orient one of the frames toward a right node exit port. See abstract of Dispensa.

Dispensa generally describes that each of the low speed modules is provided with a "cache" memory duplicating the main router routing table entries already used for previous received frames oriented toward the considered Low Speed module. Then, assuming the currently processed frame header addresses an entry already in the "cache" (in function of the frame destination address), then the current frame orientation toward the right node exit port runs faster since the "cache" is a sub-assembly of the main routing table. See column 6, lines 44-56, of Dispensa.

It is respectfully submitted that Dispensa fails to teach or suggest, at least, "wherein the external entity is connectable to at least one further router located outside said apparatus," as recited in independent claims 1, 6, 16, 18, 22, and 23.

As described in the paragraph columns 5 and 6 of Dispensa, “the main router module 22 has no physical interface with the node external world. It is used as global node routing table depository. More particularly, the main router module 22 is devoted to conventionally building-up and maintaining up-to-date a routing table representing the current network topology as seen from the considered network node. Conventional network topology maintenance protocols involving so-called control traffic are used to that end. But, as far as this invention is concerned, one should only remember that the main router module is, herein, devoted to keeping the complete node routing table. This routing table is updated during network operation by using conventional control traffic.” See, columns 5-6, of Dispensa.

In contrast, according to certain embodiments of the present invention as described on page 7, lines 22-36, of the specification “with the special packet handling according to certain embodiments of the present invention, it is enough for the router to know that some kind of special handling is needed for special packets. In practice, this means that part of the routing tables can be located in an external entity from which the router requests instructions when needed. Moreover, with the handling of special packets it is easy to manage scenarios that involve more than one router. For example, a tunnel can dynamically be created from one router to another through special packet handling rules and with the help of an external entity connected to both routers involved in the tunnel. Different external entities may also be connected to each other. On the other hand, one router may be connected to different external entities.”

With the arrangement of the present invention, in particular the co-operation of the internal entity and the external entity, the problem associated with conventional Internet routers can be overcome. Conventional routers comprise semi-static routing tables for routing data packets which are updated only via separate management procedures or via dialog between routers using special routing protocols.

The node shown in Fig. 2 of Dispensa can be regarded as such conventional router. The external entity according to the present invention is not part of the router, for example, using terminology of Dispensa, the external entity is part of a 'node external world'.

The independent claims, as amended, further clarify that the external entity is connectable to several routers, which feature should emphasize that the external entity is part of a node external world. In view of the above, Applicants respectfully submit that Dispensa fails to disclose or suggest all of the features of claims 1, 6, 16, 18, 22, and 23. Thus, it is respectfully requested that rejection of claims 1, 6, 16, 18, 22, and 23 be withdrawn.

Claims 5, 10, 15, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dispensa in view of U.S. Patent 5,751,799 of Mori (Mori). The Office Action asserted that Mori and Dispensa describe all of the features of claims 5, 10, 15, and 20. This rejection is respectfully traversed.

Mori generally describes a method and device for performing a charging operation during data communication in a data switching network such as a public packet

exchange, a public frame relay switching network, or an ATM switching network. A charge rate is graduated in accordance with a data transmission delay time or an equipment use when an alternate route is formed because of a certain state or an equipment failure in a network. See abstract of Mori. However, Mori fails to disclose or suggest, at least, “wherein the external entity is connectable to at least one further router located outside said apparatus,” as recited in the presently pending claims. Dispensa also fails to disclose this feature. Therefore, the combination of Dispensa and Mori fails to teach or suggest all of the elements of claims 1, 6, 16, 18, 22, and 23.

Claims 2-5, 7-10, 19, and 20 are dependent upon claims 1, 6, 16, and 18. Accordingly, claims 2-5, 7-10, 19, and 20 should be allowed for at least their dependence upon claims 1, 6, 16, and 18, and for the specific limitations recited therein.

For the reasons explained above, it is respectfully submitted that each of claims 1-10, 16, 18-20, 22, and 23 recites subject matter that is neither disclosed nor suggested in the cited art. Also, it is respectfully submitted that the subject matter is more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. It is, therefore, respectfully requested that all of claims 1-10, 16, 18-20, 22, and 23 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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